

**SPEECH RECOGNITION UTILIZING MULTITUDE OF SPEECH FEATURES**

**ABSTRACT**

In a speech recognition system, the combination of a log-linear model with a multitude of speech features is provided to recognize  
5 unknown speech utterances. The speech recognition system models the posterior probability of linguistic units relevant to speech recognition using a log-linear model. The posterior model captures the probability of the linguistic unit given the observed speech features and the parameters of the posterior model. The posterior model may be  
10 determined using the probability of the word sequence hypotheses given a multitude of speech features. Log-linear models are used with features derived from sparse or incomplete data. The speech features that are utilized may include asynchronous, overlapping, and statistically non-independent speech features. Not all features used in  
15 training need to appear in testing/recognition.